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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/588,017

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Francis Humblot

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ARKEMA INC.

PATENT DEPARTMENT - 26TH FLOOR

2000 MARKET STREET

PHILADELPHIA, PA 19103-3222

EXAMINER

SINGH, PREM C

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

04/29/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/588,017 | <b>Applicant(s)</b><br>HUMBLLOT, FRANCIS |  |
|                              | <b>Examiner</b><br>PREM C. SINGH     | <b>Art Unit</b><br>1797                  |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 11 is objected to because of the following informalities:  
Claim 11 recites, --“it is implemented”--. This needs to be reworded/rephrased.
2. Claim 1 (second to last line): It is not clear what is meant by --“it being possible”--  
The sentence needs to be re-worded.  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 1 recites the limitation "characterized in that it comprises the addition" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

### ***Rejections - 35 USC § 101***

6. Claims 2 and 3 are rejected under 35 U.S.C. 101 because the claimed recitation of a use (--“use is made”-- ), without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Edmonson (US Patent 5,464,525).

9. With respect to claim 1, Edmonson discloses a process for combating the corrosion by naphthenic acids of the metal walls of a refining plant in which the hydrocarbon stream is treated in the absence of oxygen, characterized in that it comprises the addition to the said stream of an effective amount of hexadecyl mercaptan (See 28-38 and Table 1, column 3, lines 20-21).

It is to be noted that the alkyl mercaptan disclosed by Edmonson has carbon atoms from 4 to 20 and has formula similar to (I) as claimed.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 2-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edmonson (US Patent 5,464,525).

13. With respect to claims 2 and 3, Edmonson invention does not specifically disclose a tertiary or tert-dodecyl mercaptan, however the invention does disclose use of any alkyl mercaptan, including hexadecyl mercaptan (See column 3, lines 10-21).

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Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify Edmonson invention and use a tertiary or tert-dodecyl mercaptan because they all belong to the general class of alkyl mercaptan and therefore, are expected to be functionally and structurally similar. See *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958).

14. With respect to claims 4 and 9, Edmonson invention discloses use of 440 ppm alkyl mercaptan (See column 3, lines 10-13).

15. With respect to claims 5 and 10, Edmonson invention discloses that the hydrocarbon stream has a TAN of 2.3 (See column 3, lines 1-2).

16. With respect to claims 6 and 11, Edmonson invention discloses that the temperature employed is 565°F (296°C) (See column 3, lines 1-3).

17. With respect to claims 7 and 12, Edmonson invention discloses using alloys containing higher amounts of chromium and molybdenum (See column 2, lines 1-6). It is known to those skilled in the art that the alloys disclosed by Edmonson comprise carbon steel. Also, one skilled in the art would use chromium and/or molybdenum in a range, including as claimed, for optimum performance of the alloy.

18. With respect to claim 8, Edmonson invention discloses that the hydrocarbon stream to be treated is selected from crude oil or the high temperature petroleum distillates derived therefrom (See column 2, lines 28-31).

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Peterson et al (US Patent 5,182,013).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PREM C. SINGH whose telephone number is (571)272-6381. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/In Suk Bullock/  
Examiner, Art Unit 1797